

WHAT IS CLAIMED IS:

1. A solar cell element comprising:
 - a semiconductor substrate;
 - an antireflective film formed on a light-receiving surface
 - 5 of the semiconductor substrate;
 - a surface electrode formed on the light-receiving surface of the semiconductor substrate;
 - a back surface electrode formed on a non-light receiving surface of the semiconductor substrate;
 - 10 a first solder layer covering the surface electrode; and
 - a second solder layer covering the back surface electrode,wherein two or more elements selected from a plurality of elements included in the surface electrode and two or more elements selected from elements included in the first solder
- 15 layer are each identical to one another.
2. The solar cell element according to claim 1, wherein one of the two or more elements is Ag, and the other elements are one or more kinds selected from Ti, P, and compounds thereof.
3. The solar cell element according to claim 2, wherein said
- 20 the other elements are included in the first solder layer at 10-100 ppm.
4. The solar cell element according to claim 2, wherein said the other elements are included in the surface electrode at 0.05-5% by weight.
- 25 5. A solar cell module comprising:

solar cell elements each including a semiconductor substrate, a surface electrode formed on a light-receiving surface of the semiconductor substrate and a back surface electrode formed on a non-light receiving surface of the semiconductor substrate; and

connection tabs for interconnecting the surface electrode on the light-receiving surface and the back surface electrode on the non-light receiving surface of the solar cell elements,

wherein a first solder layer for connecting the surface electrode to the connection tab on the light-receiving surface and a second solder layer for connecting the back surface electrode to the connection tab on the non-light receiving surface have different melting points.

6. The solar cell module according to claim 5, wherein the solder layer with higher melting point is a solder layer that covers one of the surface electrode on the light-receiving surface of one of the solar cell elements and the back surface electrode on the non-light receiving surface of another one of the solar cell elements adjacent thereto that is connected to the connection tabs temporally earlier than the other one.

7. The solar cell module according to claim 6, wherein the solder layer with higher melting point is substantially free of lead.

8. The solar cell module according to claim 5, wherein the

connection tabs are provided with through holes at connection areas between the connection tabs and the surface electrodes or the back surface electrodes.

9. The solar cell module according to claim 5, wherein the
5 connection tabs are connected to a common connection line by means of a solder, and the connection tabs are provided with through holes at connection areas between the connection tabs and the common connection line.

10. The solar cell module according to claim 5, wherein the
10 connection tabs are connected to a common connection line by means of a solder, and the common connection line is provided with through holes at connection areas between the common connection line and the connection tabs.

11. The solar cell module according to claim 5, wherein output
15 wires connected to the solar cell elements are connected to terminals of a terminal box by means of a solder, and the output wires are provided with through holes at connection areas between the output wires and the terminals.

12. The solar cell module according to claim 5, wherein output
20 wires connected to the solar cell elements are connected to terminals of a terminal box by means of a solder, and the terminals are provided with through holes at connection areas between the terminals and the output wires.

13. A solar cell module comprising:
25 solar cell elements each including a semiconductor

substrate, a surface electrode formed on a light-receiving surface of the semiconductor substrate and a back surface electrode formed on a non-light receiving surface of the semiconductor substrate; and

5 connection tabs for interconnecting the surface electrodes on the light-receiving surface and the back surface electrodes on the non-light receiving surface of the solar cell elements,

 wherein the surface electrodes and the back surface
10 electrodes are each connected to the connection tabs by means of a solder, and the connection tabs are provided with through holes at connection areas between the connection tabs and the surface electrodes or the back surface electrodes.

14. The solar cell module according to claim 13, wherein the
15 connection areas of the connection tabs are connected to the surface electrodes or the back surface electrodes by means of a solder that is substantially free of lead.

15. A solar cell module comprising:

 a plurality of solar cell elements;

20 connection tabs for interconnecting surface electrodes on a light-receiving surface and back surface electrodes on a non-light receiving surface of the solar cell elements; and

 a common connection line to which the connection tabs are connected by means of a solder,

25 wherein the connection tabs are provided with through

holes at connection areas between the connection tabs and the common connection line.

16. The solar cell module according to claim 15, wherein the connection areas of the connection tabs are connected to the common connection line by means of a solder that is substantially free of lead.

17. A solar cell module comprising:
a plurality of solar cell elements;
connection tabs for interconnecting surface electrodes on a light-receiving surface and back surface electrodes on a non-light receiving surface of the solar cell elements; and
a common connection line to which the connection tabs are connected by means of a solder,

wherein the common connection line is provided with through holes at connection areas between the common connection line and the connection tabs.

18. The solar cell module according to claim 17, wherein the connection areas of the common connection line are connected to the connection tabs by means of a solder that is substantially free of lead.

19. A solar cell module comprising;
solar cell elements;
output wires connected to the solar cell elements; and
a terminal box including terminals to which the output wires are connected,

wherein the output wires are provided with through holes at connection areas between the output wires and the terminals.

20. The solar cell module according to claim 19, wherein the connection areas of the output wires are connected to the terminals by means of a solder that is substantially free of lead.

21. A solar cell module comprising;
solar cell elements;
output wires connected to the solar cell elements; and
10 a terminal box including terminals to which the output wires are connected,

wherein the terminals are provided with through holes at connection areas between the terminals and the output wires.

22. The solar cell module according to claim 21, wherein the connection areas of the terminals are connected to the output wires by means of a solder that is substantially free of lead.